

## REASONS OF NO SHOW IN OUTPATIENT PEDIATRIC PHYSICAL THERAPY REHABILITATION IN KING ABDULLAH SPECIALIST CHILDREN HOSPITAL, RIYADH

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### ABSTRACT

*Patients who fail to show up for their scheduled medical appointment create a big issue in the hospital care system which affects clinical productivity and quality of care. There is not enough research that has examined the no-show rate of pediatric patients at outpatient physical therapy clinics. Therefore, the aim of this study was to investigate the most common reasons of no-shows and its rate amongst pediatric patients at the physiotherapy department.*

*This was a cross-sectional study conducted at the physiotherapy department of King Abdullah Specialist Children Hospital between July 2018 and October 2018. Patients' parents who failed to show-up for their appointments at the physiotherapy department were contacted through the telephone, data was collected using a telephonic questioner. Also, we used patient medical files to obtain the demographic information and diagnosis. All the gathered data was analyzed statistically using the Statistical Package for the Social Sciences (SPSS).*

*On average of 225 patients during study period had no show resulting in 17%. A total of 75 patients were failed to attend their appointment at physiotherapy clinical during the study period. The mean age of the patient was 4.5 year and the majority of them were male (53.3%). The most common reason for no show was forgetting the appointment (20%), long-distance travel (17.3%) and unavailable transportation (12%). Among those who had not attended the scheduled appointment, 16% of them did not attend the schedule appointments more than once.*

*No show rate was found a little high in Pediatric physical therapy outpatient clinic which is 17%. This study has shown that the most common reason for the no-show at physiotherapy appointments was forgetting the appointment (20%) and Long Distance Travel (17%). Most of the other studies which were done on this topic and conducted through telephone interviews supported our findings. A pilot study in a pediatric neurologist clinic identified that forgetting an appointment was the second most common reason for missed appointments. Also, a retrospective study reported that the two most common reasons for missing an appointment were forgetting (n = 97, 35.5%) and miscommunication (n = 86, 31.5%). Another study mentioned that forgetting the appointment as the third common reason (18%). This study identifies that, in order to overcome this problem, it is highly recommended to develop a flexible, easily accessible appointment system with reminder, and child's parents should be educated to adhere to scheduled appointment.*

**KEYWORDS:** Appointment, No Show, Outpatient, Pediatrics & Physical Therapy

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## **LITERATURE REVIEW**

No-shows, or missed appointments, demonstrate a widespread phenomenon in health care (1). They influence health care productiveness as physicians wait for patients who never come (1). Also, if they missed their appointment it well increases the duration of stay in hospital as well as the cost (2). In clinical practice, a no-show appointment is mostly defined as an appointment where a patient does not appear, comes too late for the appointment, or deletes the appointment within short a notice to schedule a different patient during their appointment time (3). To better comprehend the current work on no-show management, and missed primary care appointments lead to bad illness control and later appearance to care (4). No-show rates are elevated in clinics caring for underserved populations and may participate in poorer health results in this group (5). Patients who forget their appointments have provided several reasons for no-shows such as trouble getting out of work, kids care, transportation, and cost. In addition, both patients who felt better, and patients who felt unwell to come failed to show to their scheduled appointment (6).

The patient who fails to show up for their scheduled medical appointment create a big issue in the hospital care system, no-show can affect clinical productivity, cost and quality of care, and worsen patient outcome. There is no enough research has examined the no-show rate as it relates to outpatient physical therapy. "In a multi-physician center, no-shows contributed to 25.4% of the unproductive time and ultimately cost the center 14% of anticipated daily revenue" (7). Moreover, Academic pediatric otolaryngology practice study support that there is a relationship between no-show rates and lost revenue in the outpatient setting for an academic practice (8). A pilot study in a pediatric neurologist clinic conducted the most common reasons for a missed appointment which were scheduling conflict 25% followed by forgetting an appointment with 20.4% (9). Another study confirmed that there is a proportional relationship between waiting for time and no-show rate which mean waiting time is reduced from 13–0 days, while no-shows rate drops from 52%–18%. Wait times could occur when demand outweighs capacity (10). Two strategies used to improve patients to attend their appointments which are Contingency management and motivational interviewing (11). The aim of this study is to investigate the most common reasons of no-shows and its rate amongst pediatric patients at the physiotherapy department. The Specific Objectives is to investigate the no-show rate of pediatric participants at physiotherapy department at King Abdullah Specialist Children Hospital and to identify the reasons that affect the no-show rate.

The Secondary Objectives is to provide ways to overcome this problem.

## **METHODOLOGY**

This prospective study conducted on children who received physical therapy treatment at King Abdullah Specialist Children Hospital outpatient clinic in Riyadh This study was carried out in the Physical therapy pediatric outpatient clinics, the inclusion criteria for this study is all booked outpatients aged between 0 and 15 years old both female and male who received physical therapy service from all clinics that related to physical therapy department. The design of this study is a Cross-section study. Lack of studies conducted on the no-show rate and the factors that increase it in physical therapy clinics. Based on the estimated population size of patients who have failed to attend their appointment at physiotherapy department at the King Abdullah Specialist Children were around 90 patients, 5% margin of error and 95% confidence level we estimated that we need minimum 73 patients to be included in our sample using EPIINF software. A consecutive sampling method was used in this study. We contacted participants who receive physical therapy services and who do not show in physical therapy clinics between July 2018 and October 2018. The data was collected using documents and records of physiotherapy clinics of the no-show rate in pediatric clinics and gather it through EXCEL sheet. The data

collection tool in this study is a telephonic questionnaire. The questionnaire was constructed by using a panel of research team after the ethical approval we did pilot test the survey on a subset of our intended population, then we revised the survey based on the information from pilot test and finally the questioner was used in our study. The variables that are extracted from the medical record of those patients such as demographic factors, and a list of 9 items which is the most common diagnosis in physical therapy clinic. Then we interviewed the parents of those patients with no show through the telephone call from physiotherapy department and we obtain their consent orally prior the interview. These interviews were witnessed by external member. Each interview ranged around 5–8 min at maximum. We asked them about the reason for no-show in physical therapy. The data collected are entered in Microsoft excel and exported into Statistical Package for the Social Sciences (SPSS) for statistical analysis. Tables and figures are used to represent the results. The results are defined using descriptive and analytical statistics.

## RESULTS

After we exported our data of the reason of no-show into Statistical Package for the Social Sciences (SPSS), we found that the most common reason was forgetting the appointment (n=15) which represent 20% whereas, the less common reason was having a lot of appointments (n=1) which was 1.3% as shown in (table no. 3) Furthermore, we classify each reason according to four major categories relating to the patient, hospital, therapist, and environment. So, forgetting the appointment, and having a lot of appointments are considered to be related to the patient.

An average of 225 (16%) patients during study period had no show; the details are represented in table no. 1.

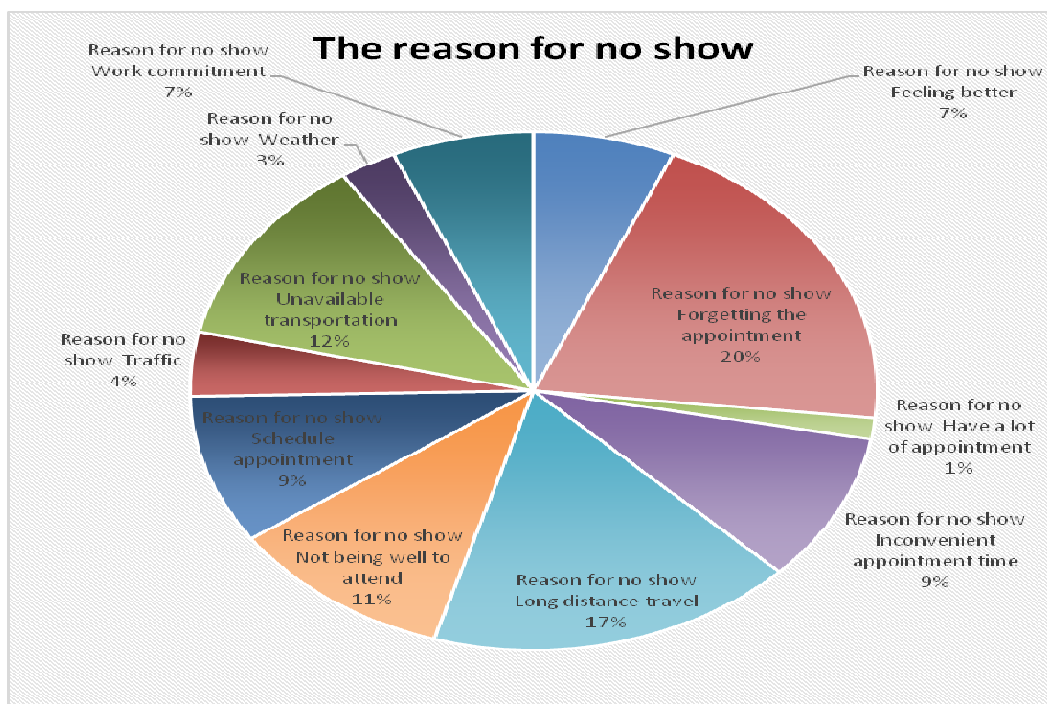
**Table 1: Rate of No Show**

	Jul	Aug	Sep	Oct
<b>Total show</b>	<b>1057</b>	<b>1489</b>	<b>1359</b>	<b>1449</b>
<b>No show</b>	<b>167</b>	<b>231</b>	<b>252</b>	<b>253</b>
<b>%</b>	<b>16%</b>	<b>16%</b>	<b>19%</b>	<b>17%</b>
<b>Grand Total Percentage is 17% No Show</b>				

The number of participants were 75 and majority of them were males (n=40) which indicate 53.3% while the females were (n=35) which represent 46.7% and, most of them were in the age category of 0–15 years. We converted the age in month and the highest range was from 1 to 30 months which indicate 49.3% of all ages. The less common group was for the age from 91 to 120 months which were 2.7% from the rest of the group. Table no. 2 shows the demographic details of the study.

**Table 2: Demographic Details of the Subjects**

Variable		Frequency	Percentage
<b>Gender</b>	<b>Female</b>	35	46.7
	<b>Male</b>	40	53.3
<b>Age (in months) (Mean <math>\pm</math> SD) (55.013 <math>\pm</math> 6.303)</b>	<b>1–30</b>	37	49.3
	<b>31–60</b>	14	18.7
	<b>61–90</b>	8	10.7
	<b>91–120</b>	2	2.7
	<b>121–150</b>	5	6.7
	<b>151–180</b>	9	12.0



**Figure 1: Shows the Different Reasons of no Show as Reflected in the Participant Answers. The Majority was the Forgetting by a 20% then the Long Distance Travel by 17%.**

**Table 3: The Details of no Show in Frequency and the Percentage. The Number of Show in this figure was Calculated According to the Session Attended by the Patients. It was Categorized into 6 Groups, Frequency Represent the Patients Attendance to Each Category (How Many Patients Attended in Each Category, and the Percentage Represent the Overall Showing**

Variable		Frequency	Percentage
Reason for no Show	Feeling better	5	6.7
	Forgetting the appointment	15	20.0
	Have a lot of appointment	1	1.3
	Inconvenient appointment time	7	9.3
	Long distance travel	13	17.3
	Not being well to attend	8	10.7
	Schedule appointment	7	9.3
	Traffic	3	4.0
	Unavailable transportation	9	12.0
	Weather	2	2.7
	Work commitment	5	6.7

**Table 4: Shows the Number of Sessions Attended by the Participants. From the Table is Clear that Majority (61.3%) of Patients have been Attending the Sessions from 1 to 9**

Variable		Frequency of Attendance	Percentage
Show (No. of Sessions Attended)	1-9	46	61.3
	10-19	7	9.3
	20-29	16	21.3
	30-39	2	2.7
	40-49	0	0.0
	50 and more	4	5.3

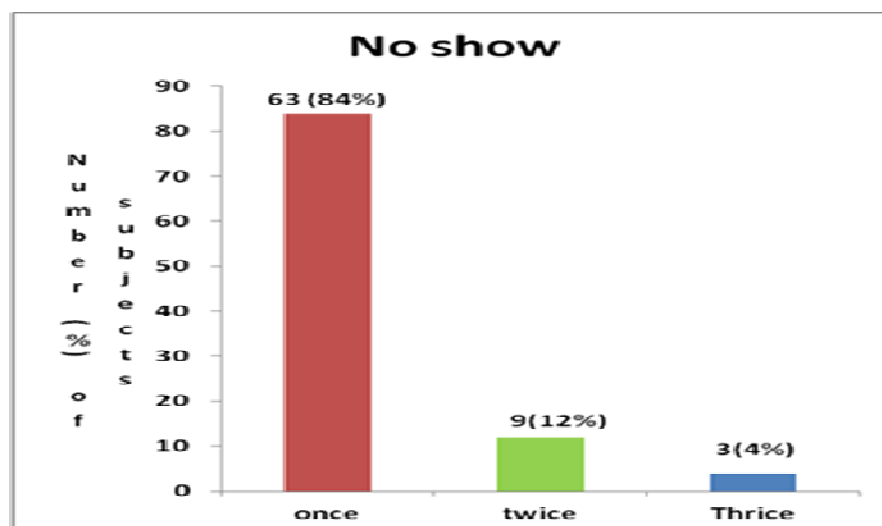


Figure 2: Gives the Bar Diagram Showing the No Show Rate among the Subjects and from the figure is Obvious that Majority (84%) of the Participants have Missed One Session, (12%) Two Sessions and (4%) Three Sessions.

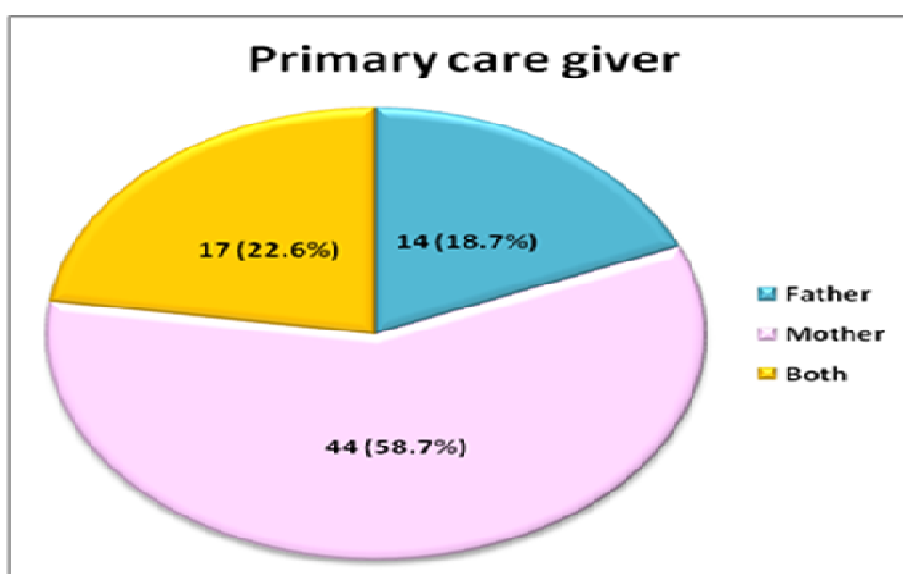


Figure 3: It was Obvious that Majority of the Participants are the Mother who was taking care of the Children.

## DISCUSSIONS

Result of this study showed that the no-show rate which is almost 17% of the total the schedule appointments. The international bench-mark for primary care clinics is 5–10% (12). This indicates that the increase in the threshold of no show by almost 7%. May be the situation in the specialized center is different from primary health care which is consequently suppose to be less than 10% due to the hi-demand on the service provided there.

The study also identified that the most common reason of no-show for physiotherapy appointments were failure to recall the appointments (20%) which is a critical issue in health care. However, the hospital provided a reminder to the cell phone of the 1st kin to the child, and automated in the hospital system, therefore, the indication of these answers may be a questionable.

Some of the patients mentioned that they forget because the reminder is just received in only one device (phone) of the parent either the father or the mother. Other patients referred the forgetting to their appointments due to a single reminder only. However, the parents need to appreciate that the absence from therapy session will negatively affect their children's health and will prolong their illness and may be worsen the condition.

The second reason was long distance travel (17.3%), which means some patients were living far away from the hospital, this could be a valid reason if the appointment frequency is high, particularly if the parent is not satisfied by the therapy or in time spent within the sessions. It happened that the parent expressed their blindness on their kids treatment, another expected reason of no show in this category is the very short time spent with the patient, which consequently put the parent in a comparison of the traveling time and parking difficulties with the limited or no benefited of short treatment sessions.

The third reason was unavailable transportation (12%), which meant that the patients did not have a car, didn't have a driver or their only car was under maintenance.

Similar studies which uses telephonic interview for data collection support our findings. A retrospective study conducted in a community health center serving predominantly Latino, non-English speaking and low-income population in Chelsea, Massachusetts reported that the two most common reason of patient no-show were forgetting (35%), and miscommunication (31.5%) (4). A pilot study conducted in a Pediatric Neurology clinic found that the second most common reason for missed appointments was forgetting an appointment (20.4%) (9). Another study conducted in a high-risk pregnant, indigent patients at a tertiary care outpatient facility reported that patients more likely to no-show to their primary care appointments because of several reasons included lack of transportation (29%), scheduling problems (19%), forgot or overslept (18%), presence of a sick child or relative (10%), and lack of daycare (10%) (3).

There are two main points that could improve upon the automated system. First, the system may be more effective at reaching patients if the call time window is changed. Many people work daytime shift and are unable to answer their phones during the day hours. Making calls in the afternoon or evening hours, perhaps between 5 pm and 10 pm, may increase the number of patients able to answer the reminder call. This change could be implemented almost immediately with a few programming changes automated call machine. Most of the people now using the Whatsapp application which is the effective communication and it is ranked 1st other than the text message which majority citizen are not utilized very often.

Efforts should be targeted towards parents' education, encouraging them to adhere to an appointment in order to improve patient well-being.

This research has numerous strengths and few weaknesses, which include cost effectiveness; we followed a qualitative design that allowed for an in-depth exploration of the reason of no-show, detailed descriptions of the patient's experiences helped to gain good understanding of the reason of no-show and we could generate hypothesis for future research. This is also the first research study done on missed appointments among patients attending physical therapy rehabilitation in King Abdullah Specialist Children Hospital in Riyadh. The limitations are namely the process was time-consuming; the reason for no-show reported may not be accurate since patients might feel uncomfortable to share the exact reason for no-show. These findings cannot be generalized to the population or other clinical settings.

## **CONCLUSIONS / RECOMMENDATIONS**

This study conclude that, in order to overcome this problem of missed appointment it's highly recommended to develop a flexible, easily accessible appointment system with multiple reminder and efficient communication from both patients and

front desk reception, parents should be educated to adhere to scheduled appointments or else to notify beforehand that they would not attend the scheduled therapeutic session. Further, screening should reinforce the consequences of no show and strict guideline should be implemented and activated within the department for no show patients since it's not activated in reality and is only on paper which leads to increase the number of no show. An active participation of the parents on the treatment program will improve the responsibility feelings and will built an effective communication between the therapist and parents. Also, the session should be long enough for the treatment and must be utilized in-full for patient care. Future research recommendation includes, investigate patients' reasons for no-show in other setting of King Abdullah Specialist Children Hospital in Riyadh to minimize no-show rates and improve the quality in the services, as well as more studies should targets logistic reasons and the ability of woman to drive and how it impacted the rates of no show.

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